JOURNAL OF Colloid and Interface Science

EDITORS-IN-CHIEF

Milton Kerker
Clarkson College of Technology
Potsdam, New York

A. C. Zettlemoyer
Lehigh University
Bethlehem, Pennsylvania

ADVISORY BOARD

G. T. Barnes
St. Lucia, Australia

M. Blank
New York, New York

H. F. Eicke
Basel, Switzerland

J. H. Fendler
College Station, Texas

S. Friberg
Rolla, Missouri

H. L. Frisch
Albany, New York

M. Hair
Mississauga, Canada

C. Huh
Houston, Texas

R. J. Hunter
Sydney, Australia

K. Klier
Bethlehem, Pennsylvania

M. Muramatsu
Sagamihara,
Kanagawa-Ken, Japan

B. Pethica
Potsdam, New York

P. Plummer
Rolla, Missouri

E. Ruckenstein
Buffalo, New York

J. Seinfeld
Pasadena, California

A. Silberberg
Rehovot, Israel

A. Vrij
Utrecht, The Netherlands

J. Wightman
Blacksburg, Virginia

Victor K. La Mer, Founding Editor
(1895–1966)

Volume 82

1981

ACADEMIC PRESS
A Subsidiary of Harcourt Brace Jovanovich, Publishers

New York London Toronto Sydney San Francisco

Copyright © 1981 by Academic Press, Inc.
All rights reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (21 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U. S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1981 articles are the same as those shown for current articles.

MADE IN THE UNITED STATES OF AMERICA

Contents of Volume 82

NUMBER 1, JULY 1981

DANUTA GÓRALCZYK AND BOŁESLAW WALIGÓRA. Thermodynamic Characteristics of Anionic–Cationic Adsorption Films Based on a Butler-Type Equation 1

C.-U. HERMANN, G. KLAR, AND M. KAHLWEIT. On the Phase Inversion in H_2O–Oil–Nonionic Surfactant Systems and Related Phenomena 6

DOUGLAS H. EVERETT AND R. TOM PODOLL. Adsorption of Near-Ideal Binary Liquid Mixtures by Graphon 14

Y. C. KO, B. D. RATNER, AND A. S. HOFFMAN. Characterization of Hydrophilic–Hydrophobic Polymeric Surfaces by Contact Angle Measurements 25

KUNIO TAKEDA, MASAJI MIURA, AND TOSHIO TAKAGI. Stepwise Formation of Complexes between Sodium Dodecyl Sulfate and Bovine Serum Albumin Detected by Measurements of Electric Conductivity, Binding Isotherm, and Circular Dichroism 38

R. HIDALGO-ALVAREZ, F. GONZÁLEZ-CABALLERO, J. M. BRUQUE, AND G. PARDO. Irreversible Thermodynamics of Transport Processes through Porous Media Composed of Particles of Different Size 45

J. RALSTON, T. VAN VLIET, AND J. LYKLEMA. Inference on Ion Binding to Polyelectrolytes from Emulsion Rheology 53

PETER R. SPERRY, HAROLD B. HOPFENBERG, AND NOREEN L. THOMAS. Flocculation of Latex by Water-Soluble Polymers: Experimental Confirmation of a Nonbridging, Nonadsorptive, Volume–Restriction Mechanism 62

P. VAN DULM, W. NORDE, AND J. LYKLEMA. Ion Participation in Protein Adsorption at Solid Surfaces 77

A. SCHELUDKO, V. CHAKAROV, AND B. TOSHEV. Water Condensation on Hexadecane and Linear Tension 83

W. E. KLINE AND H. S. FOGLER. Dissolution Kinetics: Catalysis by Strong Acids. 93

W. E. KLINE AND H. S. FOGLER. Dissolution Kinetics: Catalysis by Salts 103

S. R. REDDY, D. H. MELIK, AND H. S. FOGLER. Emulsion Stability—Theoretical Studies on Simultaneous Flocculation and Creaming 116

S. R. REDDY AND H. S. FOGLER. Emulsion Stability—Experimental Studies on Simultaneous Flocculation and Creaming 128

K. W. PERROTT. The Nature of Cationic Aluminum Species on the Cation Exchange Surface of Mica 136

G. C. WALL AND R. J. C. BROWN. The Determination of Pore-Size Distributions from Sorption Isotherms and Mercury Penetration in Interconnected Pores: The Application of Percolation Theory 141

S. MARKUS AND Z. PRIEL. Chemical Bonding between Aromatic Molecules and Glass Surfaces 150

ZENZO MORITA AND TOSHIRO IIJIMA. Adsorption and Diffusion of Sodium *p*-Dodecylbenzene Sulfonate of Tetramer Type in Cellulose 155

TAKAHARU MIZUTANI. Adsorption of Proteins on Silicone-Coated Glass Surfaces 162

PABITRA DATTA, GRZEGORZ KAGANOWICZ, AND AARON W. LEVINE. Alignment and Wetting Properties of Nematic Liquid Crystals on Plasma-Polymerized Films 167

K. TAKAMURA, H. L. GOLDSMITH, AND S. G. MASON. The Microrheology of Colloidal Dispersions. XII. Trajectories of Orthokinetic Pair-Collisions of Latex Spheres in a Simple Electrolyte 175

K. TAKAMURA, H. L. GOLDSMITH, AND S. G. MASON. The Microrheology of Colloidal Dispersions. XIII. Trajectories of Orthokinetic Pair Collisions of Latex Spheres in a Cationic Polyelectrolyte 190

HUGH R. CARLON AND ROY E. SHAFFER. Optical Properties (0.63–13 μm) of Water Fogs Stabilized Against Evaporation by Long-Chain Alcohol Coatings 203

J. CLARKE AND B. VINCENT. Nonaqueous Silica Dispersions Stabilized by Terminally Anchored Polystyrene: The Effect of Added Polymer 208

BOSCO M. C. CHAN AND JOHN L. BRASH. Adsorption of Fibrinogen on Glass: Reversibility Aspects 217

G. G. DAVID, D. F. C. MORRIS, AND E. L. SHORT. Aggregation of a Liquid Cation-Exchanger. Part II 226

KONRAD COLBOW, O. AVRAMOVIC-ZIKIC, AND S. WESSEL. The Effect of Divalent Cations on the Interaction of Dipalmitoyl Phosphatidylcholine Vesicles 233

W. H. SLABAUGH. Contact Angles of Aqueous Solutions on an Organoclay 240

NOTES

C. M. PALEOS AND ANGELOS MALLIARIS. Chemical Evidence Concerning the Solubilization Site of Undecanal in Micelles 244

JOHN L. ANDERSON. Concentration Dependence of Electrophoretic Mobility 248

KOHEI URANO, VEERAPAN CHANYASAK, AND NOBUHIKO FUJII. Adsorption Isotherm Equation of Single Heavy Metal Ion in Acidic Solution on Chelating Resin 251

CHIHCHING CHANG AND TIREN GU. Adsorption of Benzoic Acid from Binary Mixed Organic Solvents onto Sugar Charcoal and Silica Gel 254

M. N. JONES, P. MANLEY, AND P. J. W. MIDGLEY. Adsorption Maxima in a Protein Surfactant Solution 257

J. C. HOSKINS AND A. D. KING, JR. The Effect of *n*-Pentanol on the Solubility of Ethane in Micellar Solutions of Sodium Dodecyl Sulfate 260

J. C. HOSKINS AND A. D. KING, JR. The Effect of Sodium Chloride on the Solubility of Ethane in Micellar Solutions of Sodium Dodecyl Sulfate 264

NUMBER 2, AUGUST 1981

J. D. MALCOLM AND H. M. PAYNTER. Simultaneous Determination of Contact Angle and Interfacial Tension from Sessile Drop Measurements 269

W. BIEDERMANN AND A. DATYNER. The Interaction of Nonionic Dyestuffs with Sodium Dodecyl Sulfate and Its Correlation with Lipophilic Parameters 276

B. KALB, R. G. COX, AND R. ST. JOHN MANLEY. Hydrodynamically Induced Formation of Cellulose Fibers. II. Fiber Formation by Deformation of Drops with Zero Interfacial Tension 286

TAKUO NAKATSUKA, HITOSHI KAWASAKI, KATSUHIKO ITADANI, AND SHINZO YAMASHITA. Topochemical Reaction of Calcium Carbonate and Alkyl Dihydrogenphosphate 298

DÔGAN E. GÜVELI, J. B. KAYES, AND S. S. DAVIS. Partial Molal Volume and Light Scattering Studies on Certain Alkyltrimethylammonium Bromides, and the Effect of Added 1-Alkanols 307

SHELLEY KATZ AND DEREK G. GRAY. The Adsorption of Hydrocarbons on Cellophane. I. Zero Coverage Limit 318

SHELLEY KATZ AND DEREK G. GRAY. The Adsorption of Hydrocarbons on Cellophane. II. Finite Coverage Region 326

SHELLEY KATZ AND DEREK G. GRAY. The Adsorption of Hydrocarbons on Cellophane. III. Effect of Relative Humidity 339

NAGAMUNE NISHIKIDO, MASANOBU SHINOZAKI, GOHSUKE SUGIHARA, AND MITSURU TANAKA. A Study on the Micelle Formation of Surfactants in Aqueous Solutions under High Pressure by Laser Light-Scattering Technique. II 352

DUDLEY WILLIAM THOMPSON, JEREMY JOHN MACMILLAN, AND DAVID ANDREW WYATT. Electron Microscope Studies of the Surface Microstructures of Layer-Lattice Silicates 362

T. G. M. VAN DE VEN, K. TAKAMURA, AND S. G. MASON. The Microrheology of Colloidal Dispersions. X. Rotations of Spheroids at High Péclet Numbers 373

K. TAKAMURA, T. G. M. VAN DE VEN, AND S. G. MASON. The Microrheology of Colloidal Dispersions. XI. Measured Effects of Brownian Motion on the Rotation of Doublets of Spheres in Shear Flow 384

Z. AMJAD, P. G. KOUTSOUKOS, AND G. H. NANCOLLAS. The Crystallization of Fluoroapatite. A Constant Composition Study 394

YOSHIO OKAHATA, SHOICHI TANAMACHI, MASARU NAGAI, AND TOYOKI KUNITAKE. Synthetic Bilayer Membranes Prepared from Dialkyl Amphiphiles with Nonionic and Zwitterionic Head Groups 401

A. POUCHELON, D. CHATENAY, J. MEUNIER, AND D. LANGEVIN. Origin of Low Interfacial Tensions in Systems Involving Microemulsion Phases 418

G. I. ZAHALAK AND S. P. SUTERA. Fraunhofer Diffraction Pattern of an Oriented Monodisperse System of Prolate Ellipsoids 423

DAVID CHARLES THOMAS AND SHERRIL D. CHRISTIAN. Mixed Solubilization of Benzene and Cyclohexane in Sodium Deoxycholate Micelles 430

VARANASI SASIDHAR AND ELI RUCKENSTEIN. Electrolyte Osmosis Through Capillaries ... 439

GIRISH GUPTA, RICHARD F. RICE, AND WILLIAM R. WILCOX. Force Exerted on a Single Spherical Particle by a Freezing Interface: Experiments 458

ANDREW J. PESTHY, RICHARD C. FLAGAN, AND JOHN H. SEINFELD. The Effect of a Growing Aerosol on the Rate of Homogeneous Nucleation of a Vapor 465

ZAYN BILKADI AND RONALD D. NEUMAN. Effect of Humidity on Desorption of Fatty Acid Monolayers at Constant Area 480

ELI RUCKENSTEIN. On the Thermodynamics of Double-Layer Forces in Open and Closed Systems 490

CHENTE HUANG, D. FENNELL EVANS, AND E. L. CUSSLER. Linoleic Acid Solubilization with a Spinning Liquid Disc 499

STEPHEN J. WILSON AND MARTYN H. STACEY. The Porosity of Aluminum Oxide Phases Derived from Well-Crystallized Boehmite: Correlated Electron Microscope, Adsorption, and Porosimetry Studies 507

MICHAEL D. LELAH AND ABRAHAM MARMUR. Spreading Kinetics of Drops on Glass 518

ZOUBIR KESSAISSIA, EUGÈNE PAPIRER, AND JEAN-BAPTISTE DONNET. The Surface Energy of Silicas, Grafted with Alkyl Chains of Increasing Lengths, as Measured by Contact Angle Techniques 526

REINHOLD BADMANN, NORBERT STOCKHAUSEN, AND MAX JOSEF SETZER. The Statistical Thickness and the Chemical Potential of Adsorbed Water Films 534

V. MEDJIMOREĆ, K. OKUYAMA, AND A. C. PAYATAKES. Estimation of the Drag Forces Acting on Particle Dendrites 543

MAX TEUBNER AND JENS FRAHM. The Electric Double Layer around Axisymmetric Particles for Small Potentials Calculated by the Method of Images. I. Charged Prolate Ellipsoids of Revolution 560

NOTES

JACQUES AGHION, ISABELLE DUPONT, AND ROGER M. LEBLANC. Monolayers of Chlorophyll and Membrane Lipids at an Air–Water Interface: Pressure and Potential Stability in Red Light 569

R. SANJEEVI AND B. VISWANATHAN. Mobility of Water Vapor Adsorbed on Proteins and Polypeptides 572

BRUCE D. BOWEN. Effect of a Finite Half-Width on Combined Electroosmosis–Electrophoresis Measurements in a Rectangular Cell 574

C. M. Cerda, R. T. Foister, and S. G. Mason. Experimental Observation of Electrooptical Phenomena in Fibrated Suspensions 577

C. M. Cerda, R. T. Foister, and S. G. Mason. Electrohydrodynamically Induced Optical Transients in Erythrocyte Suspensions 580

Ronald D. Neuman. Monolayer Deposition on Noble Metals 583

Tiren Gu. BET-Type Equations for Adsorption of Mixed Vapors of Immiscible Liquids 584

Book Reviews 586

Author Index for Volume 82 588

The Subject Index for Volume 82 will appear in the December 1981 issue as part of a cumulative index for the year 1981.